Monthly Review

Federal Reserve Bank of Boston

February 1956

HOMESTEAD OF FRANKLIN PIERCE, Hillsborough, N. H. *Photo by Eric M. Sanford*

New England Institutional Investors Show Postwar Expansion in Assets and Employment[1]

ACCUMULATION and investment of funds by financial institutions have continued to expand in the postwar period. This expansion reflects not only general growth in the nation's wealth but increasing use of financial intermediaries by individuals for investment of savings. As the range of incomes has tended to narrow, a larger share of investment funds has been supplied by middle income recipients and a smaller share by those with top incomes. As a result, proportionately less has been invested directly by individuals and more through financial intermediaries.

SELECTED INSTITUTIONAL INVESTORS IN NEW ENGLAND

Assets and Employment, 1946 and 1954

	Assets		Employment	
	1946	1954	1946	1954
	(In billions)			
Life insurance	$ 9.1	$17.1	30,000	38,000
Other insurance	2.2	4.8	26,000	39,000
Savings institutions	8.5	12.0	10,400	13,800
Investment companies	0.8	2.5	800	1,600
Trust departments	5.0	7.5	2,200	3,200
Total	$25.6	$43.9	69,400	95,600

New England has shared in the general growth of institutional investors although some groups in the area have experienced a slightly slower growth rate in the past decade than the national average. Insurance companies, savings institutions, trust departments, and investment companies of the region are leaders in their respective fields. Regional growth has reflected not only the greater savings rate in the area but also specialized financial abilities which serve the nation. Thus investment services as well as investible funds are among New England's exports.

Within New England, the funds investment industry occupies an important place in numbers employed. Employment in the industry increased by more than 26,000 persons, or 40 per cent, from 1946 to 1954. Although the industry accounted for only about one out of 45 employed persons in the region in 1946, it accounted for one out of ten people added to nonagricultural employment between 1946 and 1954.

Life Insurance Companies

In New England as in the nation, life insurance companies hold over a third of the assets of institutional investors. This industry has had a remarkably steady growth since 1900, with its assets increasing even in the depression years of 1932 and 1933. New England life insurance companies have led in this growth and their assets increased from $9.1 billion in 1946 to $17.1 billion in 1954. This rise represented an annual growth rate of eight per cent, which slightly exceeded the rate of growth of all life insurance companies in the United States. As a result, the share of total life insurance assets held by area companies continued to increase in the postwar period — from 19 per cent in 1946 to 20 per cent in 1954.

Area employment of life companies rose from 30,000 in 1946 to 38,000 in 1954, or 27 per cent. This was about

[1]Historical background and development of the industry to 1946 were described in "Institutional Investors Form Basic Industry in New England" in the October, 1948, *Monthly Review*.

ALSO IN THIS ISSUE:

Tempo Eases in Auto Market 4

Planning for Floods in New England: Part I: State and Local Responsibility 5

Textile Diversification: Four Specific Opportunities 8

Earnings and Expenses: New England Member Banks 1955 10

Business Conditions 12

the same as the national rate of growth in life insurance employment. Thus employment in both the area and nation increased at a much slower rate than did total life insurance assets. While part of this difference in asset and employment growth is explained by greater use of machines in clerical work, most is apparently due to price inflation, which resulted in a more rapid expansion in asset values than in physical services. The number of life policies in the nation increased by only about 35 per cent from 1946 to 1954, while the dollar amount almost doubled during the same period.

Investment of life insurance company funds is guided mainly by considerations for safety of principal and adequacy of yield. Liquidity is not a special problem and a large part of assets can be acquired without regard to ready marketability. As a result, directly-acquired corporate securities and real estate held for investment have increased greatly in relative importance. Desire for improved yield has resulted in reductions of government security holdings and increases in holdings of higher yielding assets such as mortgages and corporate and state and local government securities.

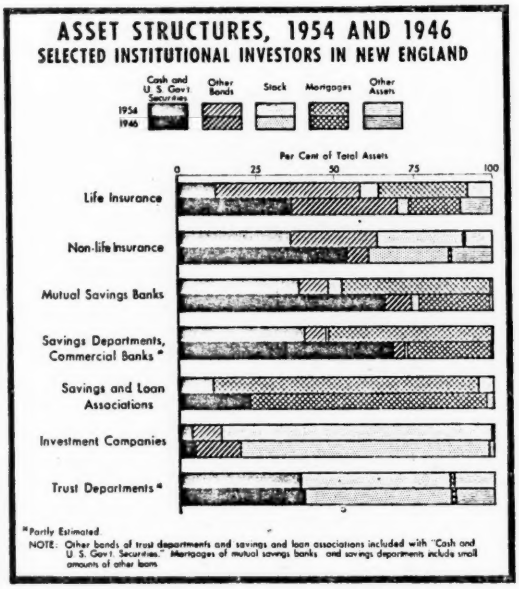
Private placement of corporate securities is an investment technique which has been used extensively in the postwar period. In this method of financing, corporations sell their securities directly to the purchaser instead of making a general offer to the public. Private placement often reduces investment costs and allows provisions which fit the needs of the borrower and lender. Actual fund transfers, for example, may be staggered over time to match expenditures of the borrower and fund inflows of the lender. At the end of 1954, about 60 per cent of corporate bond holdings of United States life companies had been obtained by this method. New England companies, however, had a somewhat lower ratio of directly-acquired securities.

Since the war a new outlet for life insurance investment has been developed, the direct ownership of investment real estate. The amount of funds involved is still relatively small but increasing steadily. Commercial and industrial properties are acquired under sale and lease-back arrangements under which real estate is purchased by life companies and then leased back to the seller on a long-term basis. Rental housing projects which are acquired by life companies are generally operated by them.

Residential properties are now being acquired at a slower rate than immediately after the war, but business properties are still being purchased in volume. These types of real estate accounted for only about two per cent of life insurance assets in the nation in 1954 and a slightly lower proportion in New England. Although the nation's life companies had real estate equaling eight per cent of total assets in the 1930's, this was accounted for almost entirely by foreclosures.

Other Insurance Companies

Fire and marine and casualty and surety insurance companies in New England more than doubled their assets from 1946 to 1954. Although this rate of growth was greater than that of any of the other groups considered here with the exception of investment companies, these insurers were next to smallest in asset size in 1954. In terms of employment, however, fire and casualty insurers of the area lead, and their increase of 13,000 worker ssince 1946, accounted for half of the total employment increase of area institutional investors.



New England's share of total fire and casualty assets in the nation has been declining slowly since the early 1940's but it is still about 23 per cent. Among the factors which probably are associated with the decline in the region's proportion are rapid growth in automobile insurance carried by subsidiaries of sales finance companies and expansion of local property insurance companies in faster growing areas of the nation.

The main consideration in the investment of nonlife insurance funds is to be able to meet sudden large cash outlays, such as follow large fires or hurricanes, for example. Most funds are invested in liquid assets or readily marketable securities.

Savings Departments

Savings trends in New England are reflected in growth of savings institutions — mutual savings banks, savings departments of commercial banks, savings and loan associations, and cooperative banks. Combined assets of these institutions in the region are 11 per cent of those in the nation. Comparative savings rates are shown by the fact that New England accounted for 9.2 per cent of the 1946-1954 increase in savings institution assets of the country — a proportion almost 50 per cent greater than its income share of between six and seven per cent.

Among New England savings institutions, mutual savings banks lead in asset size and employment. Area savings bank assets totaled $7.9 billion in 1954, up 35 per cent from 1946, while employment reached 8,900, compared to 6,900 in 1946. Savings and loan associations and cooperative banks are second in asset size and have shown the most rapid growth, with 1954 assets of $2.1 billion, over double the 1946 level. Assets of savings departments of commercial banks also were about $2.1 billion in 1954, up only slightly from 1946.

Interest rates on mortgages, the principal earning asset of savings institutions, average lower in New England than in the nation. This reflects a more adequate area supply of mortgage funds relative to demand as a result of comparatively larger fund flows to savings institutions and of additional supplies furnished by life insurance companies. Thus a competitive area in the regional market is provided which serves to improve terms and increase the quantity of credit available locally. In spite of the lower earnings rate on mortgages, area savings institutions have been efficient investors and returns to savers have compared favorably with the national average.

Legislation governing savings bank investments has been broadened somewhat during the postwar period, particularly in Massachusetts and Connecticut. These changes will improve earnings, aid in distributing funds in markets outside New England, and provide better diversification of assets.

In 1949 Massachusetts savings banks were authorized to invest a part of their funds in FHA and VA mortgages outside the region. By 1954 over $300 million had been invested under this authority. Beginning in 1950 Massachusetts banks were also authorized to purchase capital stock of out-of-state commercial banks and fire insurance companies in accordance with a stipulated formula. To date the banks have invested over $100 million in these equities. In 1955 the Massachusetts savings bank law was recodified. Mortgage-lending regulations were relaxed somewhat and savings banks were permitted to lend within limits against lease and mortgage collateral. The latter authorization in effect will allow investments in commercial or industrial properties similar to those carried out by insurance companies under sale and lease-back arrangements. Provision was also made for the establishment by savings banks of an investment fund which will be invested in selected bonds and stocks. Generally similar liberalization was made in Connecticut laws. In this state, however, the provisions also were applicable to savings departments of state banks.

Investment Companies

Investment companies, also termed investment management companies, investment trusts, or mutual funds, have increased greatly in importance in the postwar period. Of the two types, closed-end and open-end, the latter have shown the greater increase. Since 1946 assets of closed-end companies in the nation have risen only 50 per cent while those of open-end companies have more than quadrupled. Many open-end investment companies now have nationwide sales programs.

Asset growth of investment companies is the result of two factors — net investment by investors and appreciation of stock values. Of the $2 billion asset increase of open-end companies in 1954, about a quarter was accounted for by net investment, while three-quarters resulted from the rise in stock prices. Although net investment accounted for the smaller share of asset growth, this injection of new money into the stock market was in itself a factor in the rising market. In 1954, for example, the nearly $500 million of new demand represented by mutual funds was a quarter of the $1,900 million net of new stock issues supplied to the market.

New England open-end investment companies have grown at a slower rate than those in the nation. New share sales of New England companies were about $70 million annually immediately after the war, 40 per cent of the national sales of $170 million. In 1954, however, stock sales of area investment companies at $150 million were only 30 per cent of the national total of $500 million. As a result, the asset proportion held by New England companies declined from 50 per cent in 1946 to 40 per cent in 1954.

Closed-end investment companies in New England as in the nation have been retiring their shares on balance in the postwar period as share prices have generally sold below book value. Asset growth has resulted almost entirely from price appreciation. Area companies held ten per cent of the assets of the nation's closed-end companies in 1954 as compared to nine per cent in 1946.

Employment in New England investment companies and their stock distributors doubled in the postwar period — from an estimated 800 persons in 1946 to 1,600 in 1954. These employment estimates include only the persons engaged in management, research, and distribution. In addition, the industry provides employment for a sizable number of sales representatives in the area as well as in the nation and for persons in trust departments of commercial banks which handle custody accounts of investment companies.

Trust Departments of Commercial Banks

The period since 1946 has been one of expanding activity for the trust departments of New England banks, reflecting a greater demand for the various specialized services which they offer. Through the *personal trust* departments the banks serve as executor, guardian, and trustee for individuals and participate in the management of funds for nonprofit institutions. The departments also supervise the investments of corporate and individual customers. Through the *corporate trust* departments the banks serve as trustee for bond issues, transfer agent and registrar for stock issues, paying agent for bonds, and dividend disbursing agents. In 1955 more than 50 thousand individuals, corporations, and nonprofit organizations were using these services offered by district banks.

As a whole, the region's trust departments have shown a substantial increase in the volume of property under administration. Assets of personal trust departments in New England aggregated about $7.5 billion[2] at the end of 1954 — up 50 per cent from 1946. National data on trust assets are not available but it is estimated that district banks hold about eight per cent of the total. As in earlier periods, Massachusetts banks experienced the most rapid growth and their trust department assets totaled $5.1 billion in 1954, 60 per cent above the 1946 level. Connecticut banks followed with trust assets of $1.6 billion in 1954, up 50 per cent since 1946.

About 55 per cent of the property held by the personal trust departments represented investment management agency accounts and custodies and the balance personal and court trusts. The former types of services have been among the most rapidly growing divisions of trust work in the postwar period. In 1946 the proportions of investment management agencies and custodies and per-

[2]This figure is a mixture of cost, inventory market, and nominal carrying values, and is probably below market value, particularly in a period of rising security prices. Thus the aggregate represents only an approximate magnitude.

sonal trusts in New England were about equal.

In the period under review pension trusts and profit-sharing plans administered by the personal trust departments have also grown significantly in importance. An increasing number of corporations are using the trusteed form of providing employee benefits. A recent study by the SEC indicated that at the end of 1954 more than $11 billion of assets were held in pension trust funds of domestic corporations. The assets held by district banks constitute about four per cent of the total held by all trustees in the nation.

Common trust funds have been established by about 30 area banks and they have grown rapidly in recent years. These funds are designed for smaller-sized fiduciary accounts. They offer diversified investments and economical handling to beneficiaries. At the close of 1954 aggregate assets of these funds were valued at about $200 million, about ten per cent of the national total.

There was also an important increase in the volume of services performed by the corporate trust departments of district banks. Many of the larger banks reported new appointments as trustee for corporate and municipal bond issues, transfer agent, and registrar. This followed from the expanded trading on the security exchanges, increases in new security offerings, rights, stock splits, and other corporate capital changes. An increasing number of corporations have appointed district banks as co-transfer agents.

NOTE: Additional statistical data on New England institutional investors are available upon request from the Research Department, Federal Reserve Bank of Boston.

Tempo Eases in Auto Market

DURING 1955 almost eight million new cars rolled off the nation's assembly lines. Sales soared to new heights as well, with almost 7.2 million new registrations recorded. This was 30 per cent higher than last year and 13 per cent above the 1950 record level.

In New England new car sales during 1955 ran 19 per cent ahead of last year, trailing the nation's 30 per cent rise but firmly ahead of any other year on record. Sales in December fell off from previous months and New England dealers reported a slight slowing ever since the initial fall boom of the new models. This slowing, however, was from very high levels. With the exceptions of June and December, every month in 1955 saw increases over the corresponding month of 1954, ranging between four and 58 per cent.

The used car market in Massachusetts had a banner year in 1955, with 20 per cent more cars sold than in 1954. Over 250,000 used cars received new registrations in 1955, although dealers sometimes complained that liberal credit terms on new cars were drawing off customers who would otherwise be used-car buyers. Reports from dealers revealed that the prices for late model used cars were weak because of competition from new cars, but prices on older models held quite firm.

Behind the boom in car sales during 1955 lay a continuing rise in consumption expenditures, backed up not only by an increase in disposable personal income, but also by a considerable gain in the use of instalment credit. The American consumer showed a willingness over the past year to spend increasing amounts of his growing income, and saving, as a use for disposable income, dropped accordingly.

Consumer credit outstanding increased by about $6 billion during 1955, and purchases of durable-goods items headed by automobiles were primarily responsible. Automobile paper outstanding at the end of December was nearly $4 billion ahead of its level last year and accounted for two-thirds of the total growth in consumer credit. Most of this increase occurred during the first nine months of the year. Automobile credit extended in 1955 amounted to nearly $18 billion, seasonally adjusted, while repayments totaled just under $14 billion. Extensions in the year, running well ahead of repayments, reached a peak in the third quarter and contracted somewhat toward the end of the year. The lengthening of maturities on automobile paper during the first part of 1955 slowed repayments and added to the amount of credit outstanding.

Liberal credit terms played an important role in the record sale of cars and were a prime selling point of dealers faced with moving the large stocks of automobiles. Maturities of between 30 and 36 months on new car contracts became fairly standard throughout the country by midsummer, as compared with 24-month contracts in 1954. Even longer-term maturities were occasionally reported, but contract terms generally remained within the 36-month maximum during the last half of the year. Down-payment requirements continued at between one-fourth and one-third of selling price, but dealers as a rule gave discounts and generous trade-in allowances which reduced the average cash payment.

As the year drew to a close, dealers reported an intensely competitive buyers' market, rising stocks, and difficulty in disposing of new models at higher prices. They had carried out a concentrated selling campaign during the summer to move the 1955 stocks in preparation for the first shipments on new models in the fall. Some complained that the market seemed temporarily saturated, and as winter approached cars were hard to move. Although some dealers felt that credit terms were too lenient in many cases and that long maturities might lengthen the period before the customer could again buy a new car, liberal credit terms were still a big selling point and few wanted to see them tightened. Profit margins were reduced as dealers were forced by competition to absorb most of the higher costs of 1956 models.

Automotive News estimated that, in January, new car inventories throughout the nation reached an all-time record of 857,000 vehicles. Large stocks were due partly to the season of the year, which is traditionally slow, and to some slackening in consumer demand after the high sales level earlier in the year. Dealers generally felt that production was too heavy for the current rate of consumption. Auto output has been recently cut back, and February started at a level about 20 per cent below the year-ago level.

Monthly Review
FEDERAL RESERVE BANK OF BOSTON

Planning for Floods in New England

Part 1—STATE AND LOCAL RESPONSIBILITY

ALL RIVERS in all parts of the world intermittently rise over their banks. This high water is usually not very destructive if it merely runs over pasture and forest land. But when bridges, dams, roads, railroads, industries, stores, houses, or other improvements are built along waterways and are not specifically designed to withstand high water, flood damage is inevitable.

Ever since the early eighteen hundreds when water power was mechanically harnessed to New England's industries, people have given little thought to the hazards of living and working on the flood plains in this region. Although electrification has rendered most of the direct mechanical drive systems obsolete, the mill towns remain near their historic base — the running water in New England's streams.

It would be difficult, if not impossible, to move these established cities and towns completely out of the area subject to flood damage. Such plan would cause much social hardship even if it were economically justified. But it is feasible to direct the construction of new industries, new schools, new stores, and new homes onto higher land. It is also possible to design new dams, new bridges, new culverts, new storm sewers, and other public facilities so that they can withstand flood waters with a practical minimum of damage. The following paragraphs summarize what New Englanders are doing to prepare themselves for future floods and hurricanes.

Flood Control Structures

The Federal Government has assumed the lion's share of the responsibility for constructing flood control dams and local protection dikes. Although many of the New England states have contributed some money to these Federal projects and although Massachusetts, Vermont, and Rhode Island have joined with local groups in building a few structures, a comparatively small portion of this type of work is done by the states.

The Design and Maintenance of Dams

Flood control dams have done much to limit flood damage in this region, but on occasion other types of dams have done much to intensify the flooding problem. Last August, for example, flood heights on several streams in Massachusetts, Connecticut, and Rhode Island were raised when about 150 dams were overrun and washed out by unprecedented flood waters.

All New England states have enacted laws which require that design specifications of new dams be approved by some state or county authority. In addition, all six states have requirements that dams be regularly inspected for proper maintenance.

This legislation has not always been adequately implemented because of a lack of funds or qualified personnel to make the necessary technical inspections and decision. In Massachusetts, for example, the County Engineers are expected to inspect dams in addition to all their other varied work.

The authorities in many of the New England states have sometimes found it legally impractical to force owners of old mill dams to remodel their structures to withstand the extreme floods. This requirement can be beyond the financial capacity of the owner. In both New Hampshire and Connecticut, the state has had to take over dams when their rightful owners could not afford the proper maintenance. In the case of some old mill dams, proper maintenance or remodeling is a physical impossibility. For this reason some New England states have forced dam owners to breach and abandon their structures.

Despite many practical difficulties, the New England states have accomplished much. Most of the legislation regarding dams is well enforced and most dam owners are being made aware of their responsibility in designing and maintaining their property so that other people's property is not jeopardized.

Bridges and Culverts

Inadequately designed culverts and bridges can impede the passage of flood waters and be damaged by them. The resultant loss comes not only from the cost of replacing or repairing these structures but also from the local flooding which occurs when water backs up behind these channel restrictions.

Unfortunately, the cost of bridges and culverts rises rapidly with increasing size. Hence drainage structures on many roads probably should not be designed to pass the maximum or very rare stream flows. It is usually practical, however, to design culverts, bridges, and their approaches so that they are not washed out or severely damaged even when they are overtopped by high water.

Of course, major highways must be kept open at all times and the frequency of major floods and the resulting bridge damage in recent years suggest that in some states design standards for major highways should be raised.

Storm Sewers, Sewage Treatment Plants, and Water Supplies

In numerous localities, the inability of storm sewers to handle large volumes of run-off has caused a serious local flooding problem. The solution of such a problem may involve the construction of a larger system, but unfortunately the costs of rebuilding are very high.

Other public facilities have been damaged by the recent floods in all the states. Water systems have been damaged by washouts, breakage of mains at river crossings, and damage to meters, electrical controls, motors, and pumps. In the same way sewerage systems and treatment plants have been severely damaged.

There are no simple solutions which enable towns or cities to avoid this type of loss entirely. In many cases, however, a different design or location for such public facilities would have prevented much of the loss. This is an important lesson for all communities scheduling the construction of new public works.

Planning Developments on the Flood Plain

It is a paradoxical fact that the buildings least capable of withstanding high water are the ones that are often built with the least consideration of flood risks. Engineers responsible for designing dams for private utilities or bridges for highway departments usually collect all the pertinent stream-flow information before specifying design requirements. This is seldom the case for new construction of other types of real estate which are much more vulnerable to high water. New homes are continually being built along waterways in locations which are extremely hazardous. Factories are rebuilt and extended even after being partially destroyed several times.

Most of the unwise developments occur because builders are not aware or are unconcerned about the fact that a flood danger exists. Much of it can also be blamed on wishful thinking. The builders assume that the last flood was an extremely rare occurrence or that Federal flood control measures will completely eliminate floods. Bankers must also share some of the responsibility. In many cases they have issued mortgages on new real estate which is extremely vulnerable to frequent flooding. This has been done despite the fact that flood insurance is not yet available to cover any of the loss.

Continued unrestricted development should be prevented, but the mechanics of curtailing it are difficult to arrange. Most individual property owners or builders are not capable or willing to assess the flood risks in each area, and owners of land subject to flooding usually oppose flood zoning ordinances. Such ordinances outline the flood danger area on an official town or municipal map and specify what types of buildings and public facilities may be constructed within this area. For years Keene, New Hampshire, was one of the few cities in the country which enforced a flood zoning law.

Recent developments are more encouraging. During the last two years, the Rhode Island Development Council has vigorously promoted zoning and redevelopment for the coastal area subject to tidal flooding. As a result Warwick and South Kingston have adopted flood zoning ordinances and Westerly is considering such a proposal.

Last year the State of Connecticut inaugurated an extremely ambitious and comprehensive flood zoning and community redevelopment program. The State Water Policy and Flood Control Commission has been given authority to establish "on any sizable stream lines beyond which . . . no obstruction or encroachment shall be placed by any person, firm, or corporation, public or private, unless specifically authorized by the Commission." Thus, in Connecticut the State government, rather than local government, is assuming the major responsibility for preventing the construction of homes, plants, stores, and public facilities in areas subject to flood devastation. Flood danger zone lines have not yet been recorded on an official map for any of the streams in Connecticut, but as soon as the necessary hydrologic information has been compiled the act will be implemented.

The Connecticut program also provides for local participation. The flood damaged towns of Ansonia, Avon, Beacon Falls, East Granby, Farmington, Naugatuck, New Hartford, Putnam, Seymour, Stafford, Thomaston, Washington, Winchester, and Windsor have been granted financial aid by the State (under the terms of a special $655 thousand appropriation) and by the Federal government (under the terms of the Federal Housing Act as amended in 1954) to obtain professional planning assistance. Town authorities and their consultants are now collaborating in deciding what the best industrial, commercial, and residential growth pattern would be for each community. In addition, each of these towns is constructing an official development map.

In most cases, this planning effort is complemented by an action program of buying up and actually redeveloping flood devastated areas or areas subject to flooding. The State of Connecticut has already appropriated $1,750,000 to match local expenditures for this type of work and the Federal Housing and Home Finance Agency is authorized to pay two-thirds of the total cost of such projects. Thus local communities are required to pay for only one-sixth the total cost. Furthermore, the State government is willing to guarantee most bond issues floated by towns and municipalities to finance redevelopment work. In this way the towns also benefit from low-cost financing. However, the communities must be willing to support — in its entirety — the comprehensive redevelopment plan which was previously worked out in collaboration with planning consultants and approved by both the State and Federal governments.

It should be mentioned that the purpose of the proposed zoning ordinances is not to limit all new development on the flood plain to such nonintensive uses as parking lots and parks. For example, some pulp and paper mills must be located near large volumes of process water and it is possible to design the mills so that flood waters cannot cause serious damage.

Land Management and State Regulation

There are other measures for partially controlling floods. The program of the Soil Conservation Service is very valuable in reducing soil loss during high water. It also has a beneficial effect in limiting peak stream flows in minor floods on some small streams.

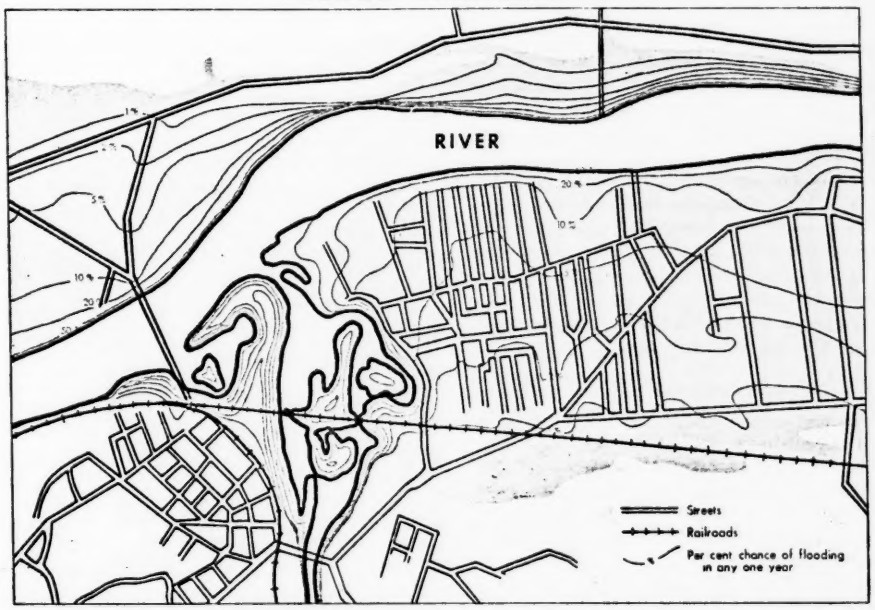
In many areas it is possible to improve the operation of power dams and some of the larger recreation and mill dams so that they can be more effective in limiting flood heights. For this reason, the Connecticut Water Policy and Flood Control Commission has been given the authority to enter into agreements with dam owners to release or hold back water at the direction of the Commission when a potential flood situation arises. Similarly, the State government in New Hampshire has been given the authority to take over the operation of private dams in emergency situations.

Interstate Action

One of the important needs on any large river basin (and on some of the larger streams) is coordinated operation of the many and various types of dams. The lack of coordination can decrease the effectiveness of an expensive system of flood control structures.

On a small scale, the State of Connecticut has at-

FLOOD RISK MAP



Map constructed with the cooperation of the Geological Survey, U. S. Dept. of the Interior

This map (of a hypothetical area) illustrates the type of information which can be presented on a flood risk map. The contour lines show the per cent chance of a flood occurring in any one year at different elevations along the river. The area shaded in color was covered by water during the maximum flood of record.

tempted to solve this problem by granting its Flood Control and Water Policy Commission authority to enter into agreements with private dam owners. Naturally, the Commission's authority does not go beyond its state line. It is possible, therefore, that some type of interstate commission (or commissions) should be established which would seek to reach a coordination agreement with the various states and the owners of the more important private dams. An interstate flood control compact is already established on the Connecticut River and its operations might be extended to include gaining support for coordinated dam operations.

It should be emphasized that an improved coordination mechanism could not have a major effect on flood losses on interstate rivers in New England. The total storage capacity available for flood control purposes in all the state and privately owned dams on these rivers is relatively small. Under some circumstances, however, improved coordination could have an appreciable effect in limiting flood peaks and thus flood losses.

Basic Hydrologic Data

New England is fortunate in having the most extensive continuous stream-flow records of any region in the country. Although the frequency of severe floods in recent years has confused the record somewhat, engineers can analyze these hydrologic data and make fairly good estimates of future flood risks in any given location. In fact it would be possible to construct maps for most of the rivers and major streams in the region, showing the relative danger or per cent chance of a flood occurring in any one year at different elevations along each waterway. The illustration on this page shows the type of information which could be shown on a flood frequency map.

The construction of these maps would involve considerable expense, but they would provide invaluable data which individuals, builders, bankers, architects, communities, insurance companies, and many others could readily understand. Such maps would also demonstrate the risks of living in the flood plain better than any other type of presentation.

Conclusion

Flood damage can be partially controlled by wise land use planning on the flood plain. Until recently this method was not popular, but the recent severe floods in New England have created a public awareness that floods are a recurring menace and that much past construction along rivers and streams was unwise.

It should also be emphasized, however, that wise land use planning is only one method of curtailing flood damage. It does not solve the problem of how to protect existing real estate values and industrial activity which is already located on the flood plain.

A later issue of this publication will discuss this problem and the Federal program of building flood control structure on New England's major streams.

Monthly Review
FEDERAL RESERVE BANK OF BOSTON

TEXTILE DIVERSIFICATION: Four Specific Opportunities

THE CHIEF EXECUTIVES of industrial firms have many responsibilities. Stockholders look to them to make profitable use of stockholders' investments. Employees with long service records expect continued employment in the firm. The community looks to the firm for maintenance of its rightful role in supporting municipal activities. To meet these responsibilities business executives have relied on an impressive array of management techniques. They have developed new products, new marketing procedures, new production methods, better accounting records, stronger financial positions, and many other management tools.

Product diversification is one such tool that has won increasing recognition in recent years. When carefully devised it has helped to improve stability, provide income growth, increase profit margins, and offset contracting markets. Diversification as an opportunity for the New England textile industry was analyzed recently in a report prepared by Arthur D. Little, Inc.[1] The January *Monthly Review* summarized the generalized aspects of diversification as a problem-solving tool. This article summarizes diversification opportunities in the non-woven fabrics, prefabricated housing, abrasives, and sporting goods industries. They seem to have opportunities because of their rate of growth, profitability, ease of entry, and suitability to the region. While none of these industries will offer opportunities for all textile manufacturers, and some may not fit any company, these industries seem to offer attractive possibilities for more detailed investigation by individual firms. Several other industries which received special analysis in the report will be the topics of later articles. Selection of these industries in no way implies that they are the only area in which there are attractive diversification opportunities.

Non-Woven Fabrics

Non-woven fabrics are a recent development in the textile industry. They are produced from a web of fiber and a chemical bonding agent.

It is estimated that in 1955 nearly 50 million pounds of fiber were used in non-woven fabrics. This market has grown from only a few thousand pounds in 1945. Uses for non-woven fabrics are continuing to grow in both the industrial and consumer fields. A total market of $100 million per year is predicted by 1960.[2]

About 15 textile manufacturers are active in non-woven fabrics. Among the six largest, two are located in New England. Typically, the manufacture of non-woven fabrics has been added as a new product by a textile company, rather than established by newcomers. The market for these products is not localized, nor is proximity to raw materials critical, except perhaps when cotton or rayon waste is used extensively.

Textile personnel can be utilized for the manufacturing operations. Up to the bonding, manufacture of non-woven fabrics is similar to that used in woven fabrics. The bonding process requires new techniques, but the drying equipment is similar to that used for textile printing. In at least one company, non-woven fabrics are handled by a supervisor whose previous experience was in woven fabrics. However, a good deal of technical knowledge has been developed in this field, and a textile company would be well advised to hire an expert to head a new operation.

Non-wovens have already been accepted as the conventional material for some applications, but development of new end-uses is still a very important ingredient of success in this field. Most manufacturers are continuously trying to develop new uses for their present non-wovens, as well as to develop new fabrics to meet special conditions.

Relative to other diversification opportunities, the manufacture of non-woven fabrics offers a textile company maximum utilization of existing skills in the production of a new product with an expanding market. Production techniques are transferable to such a new operation, although additional ones must be obtained. Marketing of these products for some companies will be similar. Of greatest significance, however, is the opportunity which the manufacture of non-woven fabrics gives to exploit textile management's understanding of the textile industry.

Expansion of the market for these products offers an existing textile company an opportunity to use present skills in a more profitable area. The new character of these products gives a textile company an opportunity to get in on the ground floor in this industry. Companies with abilities in the textile industry probably have a real advantage over newcomers in starting the production of non-woven fabrics.

Diversification into this area, however, would be a challenging assignment for any textile company, particularly since establishment of a new operation is the only means of entry. Management policies, production techniques, and marketing strategy would be sufficiently different to demand considerable flexibility and ability. Since this field allows maximum utilization of existing abilities while at the same time offering a textile company a chance for a "fresh start" within an area of familiarity, non-woven fabrics should be among the first considerations of a company planning diversification.

Prefabricated Homes

The most dramatic growth in the present residential building market is in prefabricated homes. Shipments of prefabricated homes in the nation have risen from about 30,000 units in 1948 to an estimated 100,000 units in 1955. Forecasts for the residential housing market look to gradual increases in the market up to 1960, with greater growth in the early part of the next decade. With continuing emphasis on low-cost housing, prefabricated houses are expected to increase their share of this market.

There are between 80 and 90 manufacturers of prefabricated homes in the United States today, about 11 of which are located in New England. Since a manu-

[1] The full report by Arthur D. Little, Inc. on "Diversification — An Opportunity for the New England Textile Industry" (109 pages) is available from the Federal Reserve Bank of Boston at a price of $1.35.

[2] *Journal of Commerce*, April 8, 1955, "Nonwoven Textiles Gain Favor."

facturer is roughly limited to a market area within a radius of 300 to 500 miles of his plant, companies tend to be regionally located. The greatest number of producers are located in the Midwest, due largely to the industry's origins there. As a result of these producers' marketing efforts, the Midwest is also the largest market for prefabricated houses.

Opportunities for a New England producer appear to be particularly attractive because frame houses are completely acceptable to New England consumers. The density of New England's population offers a large number of potential buyers within the producers' market area. Informed industry sources characterize the industry as very profitable.

With the expected expansion of the prefabricated housing industry, there should be opportunities for a textile company to combine with an existing home manufacturer to the benefit of both. A textile company can provide capital for expansion of the prefabrication operation. The management background of many prefabricated companies is in the building trades, but prefabrication is essentially a manufacturing operation. It is probable that textile management can contribute much from its long experience in manufacturing. In return, a textile company would gain a position in an expanding, profitable industry.

Some opportunity may exist for an enterprising textile company to enter this field through establishment of a producing company. Acquisition of experienced personnel and considerable self-education would be necessary for such a venture, but the returns might be correspondingly greater.

Abrasives

The total dollar volume of the abrasives industry was about $325 million in 1953. Abrasive grains accounted for $50 million of this volume, coated abrasives for $100 million, and bonded abrasives for $175 million.

Growth of the abrasives industry has been comparable to the growth of gross national product over the past 20 years. Future growth is expected to at least equal that of the national economy. The rate of growth of coated abrasives is expected to increase on the basis of improved technology. This may give the whole industry a better-than-average future performance.

There are three kinds of producers of abrasive products: (1) large companies for which abrasives are just one product line, (2) large companies for which abrasives comprise their entire product line, and (3) small companies, most of which produce bonded abrasives, and which are wholly in the abrasives field. Of 36 major companies in the abrasives industry in 1952, 14 companies were located in New England. Three of the New England companies mainly serve the northeast and the remainder serve the national market.

This industry is relatively stable, with a recent record of few new entrants and few failures. Characteristically, prices are stable with price cutting rare. Although profits vary from year to year, the profit before taxes of a good abrasives company should average 12 to 14 per cent of net sales; profits after taxes should average six to seven per cent of net sales.

For many textile companies the stability, growth outlook, and profitability of the abrasives industry will be attractive. Diversification into this industry would give a textile company an interest in a sound area of industry. The range of small but promising companies in this field suggests that diversification can be accomplished through the purchase or acquisition of a going concern. On the other hand, diversification through entrepreneurship or sub-contracting are equally attractive alternatives in view of low entry costs and the market outlook.

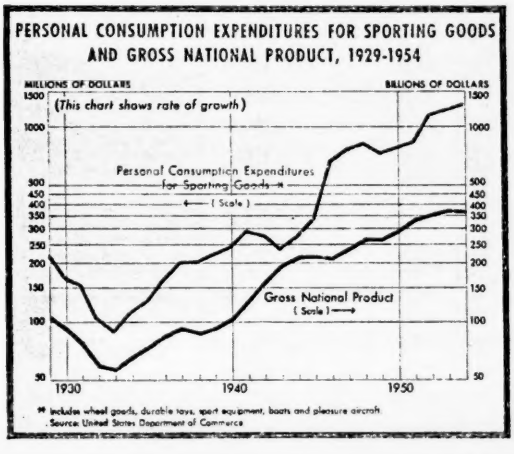
Sporting Goods

The market for sporting goods has changed significantly in the past 30 years, due largely to changes in the distribution of national income and increased leisure time. An accompanying chart compares the growth of expenditures for sporting goods with the growth of the national economy. The outstanding growth of sporting goods is readily seen.

Companies manufacturing sporting goods are typically small and generally produce only one line of sporting equipment. There are between 800 and 900 producers in this industry. About one per cent of these firms, several of them with complete lines, produce about one-third of the industry output. Practically all the products of this industry are represented in New England. Roughly ten per cent of the companies in this industry are located in New England. They produce almost one-fifth of the value of products shipped.

While success in some parts of this industry depends to a great degree upon brand acceptance of a manufacturer's products, as in skis or golf clubs, in other areas of the industry brand name is relatively unimportant. The sales of many companies in this industry are seasonal, but it is, in general, a relatively profitable industry, and, for some companies, very profitable.

With the expanding market for sporting goods, many companies producing for this industry may need additional capital to exploit market growth. Were a textile company to answer this need, the textile manufacturer would gain entry into a growing and profitable business. The wide use of fabrics in sporting goods may provide an opportunity for a transfer of skills. It therefore appears to be an appropriate consideration for textile management which wishes to diversify.



Monthly Review
FEDERAL RESERVE BANK OF BOSTON

EARNINGS AND EXPENSES — New England Member Banks 1955

BANKING IN 1955 in New England reflected the record level of business activity achieved in the region. As in the nation, the year was one of transition from a narrow to a broadly based recovery. The demand for bank loans expanded correspondingly and in operations banks dealt with more people and handled more transactions than ever before. Customers were offered a greater variety of services as well as many improvements in facilities. The region's larger banks served nationwide as well as local business, and also participated more actively in financing foreign trade.

All categories of earnings were higher than in 1954. The larger net current operating earnings reflected the rise in gross operating earnings which substantially exceeded the increase in expenses. In Boston the net credits from noncurrent transactions were sharply higher and net profits after taxes rose 25 per cent. This gain was caused chiefly by the experience of one bank which reported a large nonrecurring credit. If adjustment is made for this credit, aggregate net profits would have been moderately lower than in 1954. At the outside banks, the improvement in net current operating earnings was more than offset by losses on securities sold and other noncurrent charges. Net profits were about ten per cent lower than those reported last year. There was, however, considerable variation in profit experience among the banks within both areas. A number reported moderate increases for the year.

Gross operating earnings reached $266 million and exceeded those of the previous year by about nine per cent. The rate of increase was closely similar at both Boston and outside banks. The principal factor contributing to the increase was the higher income from lending operations, reflecting both a larger volume of loans at improved lending rates and increased proportions of higher yielding consumer and real estate loans.

MEMBER BANKS EARNINGS, EXPENSES AND PROFITS
(Amounts in Thousands of Dollars)

	Boston		Other First District Banks	
	Dec. 31, 1955	% Change Dec. 31, 1954	Dec. 31, 1955	% Change Dec. 31, 1954
Earnings	**91,504**	**+ 8.8**	**174,320**	**+ 9.2**
Interest received on bonds and stocks	17,502	+ 2.2	39,498	+ 1.5
Interest received on discounts and loans	50,278	+ 9.8	100,020	+ 12.2
Service charges on deposit accounts	2,817	+ 2.5	12,927	+ 9.9
Trust department	12,065	+ 23.9	11,280	+ 12.6
All other income	8,842	+ 1.4	10,595	+ 8.2
Expenses	**49,613**	**+ 4.7**	**116,302**	**+ 8.5**
Salaries and wages	27,311	+ 4.1	56,164	+ 6.7
Interest paid on time deposits	1,915	+ 15.2	16,256	+ 9.7
All other expenses	20,387	+ 4.7	43,882	+ 10.3
Net current earnings	**41,891**	**+ 14.1**	**58,018**	**+ 10.7**
*Non-current transactions	—5,133	+111.8	—16,206	+288.4
Profits before income taxes	36,758	+ 7.2	41,812	− 13.3
Taxes on income	14,304	− 12.4	17,584	− 17.8
Net profits	**22,454**	**+ 25.0**	**24,228**	**− 9.7**
Cash dividends on common stock	12,129	+ 8.3	14,381	+ 8.5

*Includes an unusual non-recurring credit of $5 million reported by one Boston bank. If this credit is eliminated, the net profits would be −2.8 per cent.

Despite the reduction in investment holdings, earnings from this source increased, reflecting the more attractive yields prevailing in the securities' markets. Commissions and other income of the banking departments expanded further, arising in part from charges for servicing an increased number of checking accounts. Income from trust services also improved as a result of revised fees as well as a higher level in dollar value of property under administration.

Operating expenses totaled $166 million — seven per cent above those in 1954. Larger salary payments accounted for about one-third of the rise. Interest paid on time deposits showed a sharp percentage increase. In Boston this was caused by gains in deposits held for the account of foreign banks. Outside Boston the average volume of savings deposits was only slightly higher but rates paid were advanced as commercial banks continued to meet the competition of other institutions. The higher cost of handling a larger volume of business as well as increases in staff benefits caused a rise in other operating expenses. As earnings rose faster than expenses, net current earnings increased and were 14 per cent higher in Boston and up about 11 per cent at the banks outside.

Lower noncurrent profits coupled with substantially larger loss items, including transfers to valuation reserves, resulted in net charges some three times the size of those reported last year. These charges were relatively heavier at banks outside than at those in the city. In contrast to 1954, losses on securities sold generally exceeded recoveries and profits. A somewhat lower level of security prices prevailed throughout 1955. Many banks continued to strengthen their tax deductible reserves against future possible loan losses.

Although cash dividend payments exceeded distributions in 1954 by almost ten per cent, they remained conservative and amounted to $17 million. In keeping with policies followed in other industries, many banks raised their dividend rates or declared extras. In Boston dividends paid were 4.5 per cent of total capital accounts and at banks outside 3.5 per cent. The balance of net profits for the year $20 million — 44 per cent — was used to improve capital accounts.

Changes in Earning Assets

The rapid growth in output of goods and services was supported not only by higher incomes but also by a steady rise in all of the major classes of loans. Increased inventories and receivables added to the working capital needs of industry and trade, and substantial outlays for plant and equipment enlarged the demand for term loans. Sustained consumer buying of automobiles and other durable goods contributed to the rise in instalment credit, and vigorous activity in housing resulted in a corresponding volume of mortgage financing. City banks carried a larger volume of loan participations for bank correspondents as a result of active loan demand in their own communities. Total loans at district banks at the end of the year were some 15 per cent above outstandings a year ago. The comparatively moderate rise in deposits of the region's banks as in the nation re-

flected financing of the rising loan volume by liquidation of investments rather than deposit expansion.

Commercial loans — Strength in the demand for business loans came from a diversified list of industries, trade, and service groups. Areas in which the demand was well sustained include utilities, textiles, chemicals, metal manufacturers, and sales finance companies. Food processors and commodity dealers borrowed somewhat less in 1955 than in recent years, owing principally to lower prices of raw materials. Some banks increased their volume of loans to real estate mortgage companies.

Real Estate loans — Mortgage holdings of the region's banks increased about ten per cent for the year. Holdings of conventional mortgages showed the largest change. In part the increase represented acquisitions for the banks' own accounts but it also reflected warehousing by other mortgage lenders through the sale of mortgages to the banks under firm commitments for future purchase.

Consumer loans — Record sales of cars and trucks in the region contributed to the increase in instalment loans. Total instalment credit increased about 18 per cent. More than four-fifths of the rise was accounted for by automobiles. Paper arising from sales of other durable goods showed a small decline. The net increase in consumer credit during the year was stimulated by a general easing of terms — both down payment and maturity.

Investments — Most banks reduced their holdings of securities — principally Treasury bonds — to support the larger volume of loans. Despite the reduction, earnings from investments improved. Banks realigned portfolios to improve yield as rates firmed. In general, maturities were lengthened moderately. Security swaps were made for tax purposes and some further shifting occurred from U. S. Securities to increased holdings of other securities.

MEMBER BANK STATEMENT OF CONDITIONS
(Amounts in Thousands of Dollars)

	Boston		Other First District Banks	
	Dec. 31, 1955	% Change from Dec. 31, 1954	Dec. 31, 1955	% Change from Dec. 31, 1954
Total Assets	$2,975,976	+ 3.8	$5,290,473	+7.4
Total reserves, cash and balances	**$ 742,213**	**+11.7**	**$1,120,581**	**+15.7**
Total investments	**$ 808,672**	**−15.5**	**$1,993,003**	**− 3.2**
U. S. securities	660,434	−19.0	1,540,738	− 6.4
Other securities	148,238	+4.6	452,265	+ 9.2
Total loans and discounts	**$1,380,918**	**+16.9**	**$2,095,194**	**+15.2**
Commercial and industrial loans	950,189	+14.4	795,991	+17.5
Real estate loans*	109,451	+ 1.1	593,448	+ 9.7
Other loans to individuals	238,646	+27.8	593,525	+12.3
All other loans	112,815	+35.2	146,611	+45.3
Reserve for bad debt losses, etc.	30,183	+ 9.8	34,381	+20.6
All other assets	**$ 44,173**	**−30.5**	**$ 81,695**	**+ 6.0**
Total Liabilities and Capital Accounts	$2,975,976	+ 3.8	$5,290,473	+ 7.4
Liabilities	**$2,704,628**	**+ 3.7**	**$4,879,859**	**+ 7.7**
Demand deposits	$2,407,105	+ 3.9	$3,639,080	+10.1
Time deposits	237,090	+ 9.1	1,180,065	+ .8
All other liabilities	60,433	−18.2	58,628	+ 4.6
Capital accounts	**$ 271,348**	**+ 5.3**	**$ 410,614**	**+ 4.7**

*Adjustment made in December 31, 1954 due to reclassification.

Policy Developments During the Year

Over the course of the year as production and employment expanded and credit demands became strong and persistent, the Reserve System gradually moved toward a policy of monetary restraint. For the commercial banks this policy acted to place restrictions on the expansion of deposits and made it necessary to sell securities and at times to borrow at the Reserve bank to meet increased loan demands. At the same time it encouraged a rise in interest rates. The impact of the policy was particularly marked in the larger money centers.

During the first half of the year, money and capital markets adjusted to the influence of a progessively lower level of free reserves and, during the last half, to a sustained level of net borrowed reserves. From an average level of $365 million in January, reserves worked down to about $100 million in June and fell below zero in July. By midsummer they were some $500-$600 million below the average which had prevailed during the last half of 1954 when a policy of ease had been followed. Reserve positions tightened substantially in early August and for the balance of the year remained under some pressure as net borrowed reserves averaged $300-$500 million. Member bank borrowing at the Reserve banks rose sympathetically and in the latter part of the year averaged $600-$700 million. On balance for the year, net reductions were made in U. S. Securities held in the System account as operations were directed to offsetting factors which could contribute to ease and also to absorbing reserves from the markets.

As reserve positions tightened, the discount rate was used more frequently during the year as an instrument of monetary policy. Between April and November it was raised in four steps, from 1½ per cent to 2½ per cent.

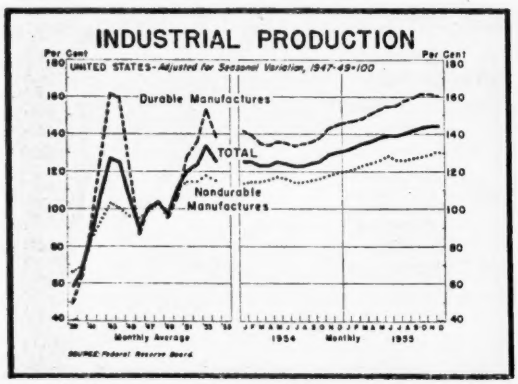
Margin requirements were also changed twice during the year when credit began to be used more actively in the stock market. Levels went from 50 to 60 per cent in early January and to 70 per cent in April.

In late July the housing authorities attempted to moderate the rise in the volume of real estate lending. Down payments were increased and maturities shortened on FHA and VA mortgages. In September loans to members of the Home Loan Bank System were curtailed. The degree of restriction, however, was modified later in the fall.

As both public and private demands for credit continued to press heavily on smaller supplies of funds, market rates firmed. Yields on Treasury bills moved over a wide range from 1.08 per cent in January to 2.63 per cent in December, following reasonably well defined cycles of fluctuation. Rates on bankers acceptances and commercial paper were marked up substantially. Monthly mark-ups carried 90-day acceptance rates from 1.25 to 2.50 per cent and commercial paper from 1.31 to 3.00 per cent. Along with the August increase in Reserve bank discount rates, the rate on prime commercial loans was raised from 3 to 3¼ per cent. There was a resultant upward trend in other loan rates. With further market tightening in October, the rate was moved to 3½ per cent. In contrast to short-term rates, long-term rates changed proportionately less and were moderately lower in relation to short-term rates than in the period of restrictive credit action in 1953. Yield fluctuations in the long-term sector of the bond market remained narrow in the last half of 1955.

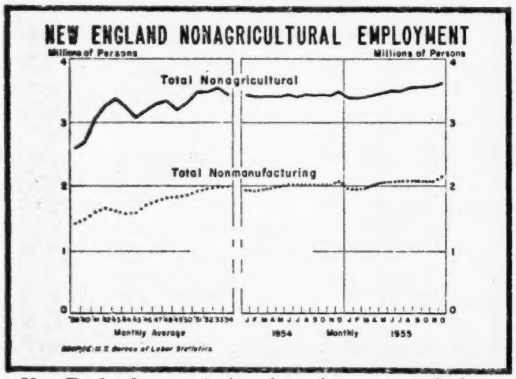
Monthly Review
FEDERAL RESERVE BANK OF BOSTON

Business Conditions

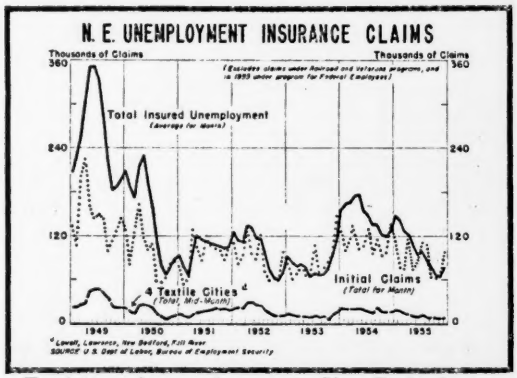


Production on an adjusted basis remained at the record high of 144 in December. Durables dropped one point as auto output was cut back. Nondurables maintained the November peak level, led by the apparel, chemical, textile, and petroleum industries.

Department stores sales in New England recorded the best December ever on a seasonally adjusted basis. The index reached 114, down two points from November, but four points above a year ago. Stocks rose three points in December, seven points above last year.



New England nonagricultural employment reached a peak level in December, with nonmanufacturing employment surpassing any month on record. In manufacturing employment, all industries but ordnance stood well above the December 1954 level.



Total insured unemployment in New England rose slightly in December but was nonetheless well below any December level for the past seven years except 1952. Initial claims likewise rose but were 25 per cent below the year-ago level.

Consumer prices dropped slightly in December to 114.7. Wholesale prices were 1.6 per cent above the year-ago level but remained almost unchanged from the year previous. The spot-commodity index dropped mildly in January from the December level.

New England construction awards started 1956 at a level higher than any January on record and 37 per cent above the total valuation in January 1955. Public works led the rise, more than double the year-ago level. Residential awards declined for the third month.